

Title

Watershed scale study of forest fragmentation in Feds Creek-Levisa Fork Watershed, Pike County, KY

Abstract

Economy in Eastern Kentucky is dependent on its coal resources, and surface coal mining is one of the major drivers of land cover change in the region. Large-scale land cover change, especially forest fragmentation, results in loss of forest functionality affecting forest health and sustainability. The main objective of this research is to investigate extent of forest fragmentation resulted by surface coal mining between 2010 and 2016 in Feds Creek–Levisa Fork watershed in Pike county, Kentucky. Landscape fragmentation v2.0 will be used to assess four main forest fragmentation categories: patch, edge, perforated and core. The results from this study is expected to detect any trends in forest fragmentation categories related to surface coal mining activities in the study area, identify effects of forest fragmentation in forest structure and biomass and assess forest fragmentation effects on watershed hydrology.

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